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AUTHOR Moriarty, Dick; Moriarty, Mary
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ABSTRACT

Through a review of the literature, this presentation provides information on eating disorders as they relate to sport and fitness and examines the role of all physical and health education teachers, coaches, administrators, and guidance counsellors in either precipitating or preventing anorexia nervosa or bulimia. These professionals are in a position to provide a counterculture to five sociocultural influences identified with eating disorders: (1) pressure to be thin; (2) glorification of youth; (3) changing roles of women; (4) the popular media; and (5) athletic elitism and cosmetic fitness. Teachers and coaches are encouraged to familiarize themselves with the signs, symptoms and characteristics of eating disorders so that they can play their role in detection, referral, treatment, and prevention. In addition, they should familiarize themselves with the following five "Ps," i.e., who is Predisposed to an eating disorder; what might Precipitate and Perpetuate an eating disorder; what is available by way of Professional help and what role do teachers and coaches have to play in Prevention. The paper also discusses results of a National Collegiate Athletic Association Survey; sport/fitness programs and maladaptive behavior; competitiveness in sport/fitness and eating disorders; and referral and treatment of athletes with eating disorders. (Contains approximately 75 references.) (LL)

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# SOCIOCULTURAL INFLUENCES IN EATING DISORDERS: SHAPE, SUPER WOMAN AND SPORT

by Dick and Mary Moriarty
University of Windsor
Windsor, Ontario

Thanks to Cahper for the great honour of being named as the R. Tait McKenzie Scholar. I would like to share the honour with some of my colleagues who have influenced my involvement in Cahper and collaborated in various research activities. P.J. Galasso, former Dean of the Faculty of Human Kinetics at the University of Windsor, encouraged me to join Cahper many years ago. Helen Gurney, of the Ontario Ministry of Education, stimulated my interest in primary and secondary physical and health education and sports, and in women's issues. Gerry Glassford was my mentor prior to taking over as Chair of the Cahper Research Council. Earle Zeigler presented an excellent role model for multidisciplinary studies. All of these people are R. Tait McKenzie type renaissance people many years ahead of their time using the past as prologue for the future. My principal collaborator, personally and professionally, is my wife, Mary Tilden Murray Moriarty, who collaborated with me in preparing this presentation.

Prior to joining Cahper, and indeed subsequently, our professional lives revolved around sport and athletics, while I served as the Director of Athletics, and then Men's Sports, at the University of Windsor for almost thirty years. In 1970, with colleague James Duthie, I founded the Sports Institute for Research through Change Agent Research (SIR/CAR). Our research involved a number of studies of children in youth sports, sport and the law, studies for the Royal Commission on Violence in the Communications Industry, sport in the secondary schools of Ontario and, more recently, interdisciplinary research with Canadian national teams - men's baseball, women's softball - and Ontario provincial lacrosse. Probably we would be

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talking about one of these topics, but for a tragic event in our family, which occurred on March 5, 1982, when our beloved daughter, Erin Mary Moriarty, who was a nurse at Toronto General Hospital, died suddenly and unexpectedly of eating disorders. Since that time, Mary and I have turned our personal and professional lives to the study of eating disorders as it relates to sport and fitness. Mary and I put together some slides and comments on the role of teachers and coaches in precipitating or preventing eating disorders. Throughout we tried to keep in mind the tripartite contribution of R. Tait McKenzie as (1) a health professional and surgeon, (2) artist and sculptor, and (3) a professional physical and health educator and sport and fitness instructor.

All physical and health education teachers/coaches, administrators and guidance counsellors should be concerned about eating disorders as a health and life threatening illness, since eating disorders often are described as a 'diet and fitness program gone wild.' The eating disordered individual starts a diet like anyone else, but for some unknown reason, the eating disordered individual is driven to further weight loss, even to the point of emaciation, or becomes addicted to compulsive binging and purging. Similarly, what started out as a moderate, healthy fitness or sport program ends up as frenzied compulsive exercise which dominates the person's life. The diet and fitness/sport programs which start as a solution to stress problems of life, in turn become the problem. 'Anorexia athletica' (Aruna Thuker, 1987), 'exercise anorexia and bulimia' (P.J.V. Beaumont, 1986) and 'addictive sport and cosmetic fitness ranging from starvation to steroids' (Moriarty and Moriarty, 1989) are the legacy.

No reliable research studies or statistics exist on the incidence of eating disorders; however, Naomi Wolfe in her excellent (and controversial) book, The Beauty Myth: How Images of Beauty Are Used Against Women (1991), has a chapter on "Hunger" in which she points out:

1. Eighty-five to ninety percent of those with eating disorders are women (although the number of males is increasing)
2. One million women per year in North America develop eating disorders
3. Two hundred thousand women die from eating disorders per year (or eighteen thousand per month) which she points out is more than died from AIDS from the time of its inception to the end of 1988, according to the World Health Organization statistics on one hundred and seventy-seven countries.
4. Eating disorders has one of the highest fatality rates for any mental illness. Brumberg (1988) records five to fifteen percent of hospitalized anorexics and L.K.G. Hsue (1990) gives a death rate of up to nineteen percent for bulimia.

One third of these people die from actual starvation, one third from medial complications resulting from the abuse of food, such an electrolyte imbalance and heart seizures and one third die of suicide. On the other side of the coin, if detected and treated, over seventy percent of eating disordered individuals recover. Forty percent recover fully, thirty percent substantially recover, although they may require in or out patient treatment, and there is an additional ten to fifteen percent who survive, albeit with serious health problems.

Bulimia consists of recurring episodes of binge eating, in which the person feels unable to stop eating voluntarily, followed by a variety of weight control methods, such as self-induced vomiting, fasting, consuming diuretics and purging with laxatives or exercise. Anorexia nervosa is an emotional disorder characterized by an intense fear of normal weight, lack of self esteem and distorted body image, which results in self-induced starvation. Eating disorders are a complex physiological, psychological and social illness.

Teachers and coaches should familiarize themselves with the signs, symptoms and characteristics of eating disorders so that they can play their role in detection, referral,

treatment and prevention of eating disorders. In addition, they should familiarize themselves with the five 'Ps', i.e., who is Predisposed to an eating disorder, what might Precipitate and Perpetuate an eating disorder, what do you need in the way of Professional help and what role do teachers and coaches have to play in Prevention.

In terms of predisposition, Type A personalities, perfectionists and success-oriented people may be predisposed to succumb to eating disorders. These people usually are tops in school, sports and social life - overachievers in a paternalistic, elitist system. School and sport organizations often are programmed to burn out the best young people - the givers and the doers.

In terms of precipitation, initiation of a diet or sport or fitness program has often been identified with the development of an eating disorder. Certainly any change in the person, such as occurs at adolescence, or in the situation such as moving from one level of education to another, or one level of competition to another, may trigger a bout of eating disorders. Teachers and coaches should be sensitive to changes in the lives of their students and athletes. Any loss such as the death of a parent or loved one, or perceived loss, such as breaking up with a boyfriend, or being subjected to sexual harassment or abuse, could lead to an eating disorder. Certainly teachers and coaches and other health professionals should avoid counselling for dieting. Canadian figure skater, Charlene Wong, developed an eating disorder after being counselled to lose weight by her coach. In 1984, at the Canadian Figure Skating Championship, the five foot four figure skater finished second when she weighed 112 pounds. She was told to lose eight pounds over the summer. She lost them and kept going, thinking the more she lost, the better. By fall she weighed ninety pounds and had turned into a fitness fanatic, living on a diet of cereal and muffins. Charlene Wong told the CBC radio program, "Morningside"

> suddenly dieting became more important than skating. I wasn't even really aware of it. Being a perfectionist had something to do with it, too. I am a very disciplined person. I want everything to be perfect, even my weight. (Verve, August/September, 1986: 44).

In terms of perpetuation, eating disorders appear to be addictive in nature. Dr. Marianne Marazzi (1986), of Wayne State University, has both animal and human research which suggests that the autoimmune system does release endorphins which lead to a 'high' when someone starts on a diet and engages in excessive exercise. As people become physiologically and psychologically addicted, the exercise and diet which started out as a solution to the problems of life becomes the problem. Individuals confuse concern with criticism, since it is difficult to reason with a starving person. Anorexics deny they have a problem; bulimics admit it, but maintain they will take care of it on their own. 'Tough love' usually is required to get the student into treatment.

Professional help requires accurate diagnosis and appropriate treatment. A team approach is advocated, with some combination of a medical doctor, clinical nurse, nutritionist or dietician, social worker, working in cooperation with a psychiatrist or psychologist. A variety of treatment is available: i.e., in hospital, day hospital and outpatient - in a variety of programs including behaviour modification, cognitive therapy, educational therapy, psychotherapy, pharmacological (drug) therapy, and/or family therapy. Frequently, these treatment modalities are augmented with self-help and support group activities.

Eating disordered individuals and their significant others (teachers, coaches, parents and loved ones) should appreciate the fact that 'it's a long, bumpy road to recovery.' However, 'there is life after eating disorders.'

Prevention is the best form of treatment. Physical and health educators and coaches have an indispensable role to play in primary prevention of eating disorders (before they occur) and in secondary prevention (cutting down on the chronicity of this illness by early identification and referral).

The role of the health professional is to discourage dieting by pointing out that when you diet your system shuts down. Dieting while growing leads to stunting of growth, malnutrition and adverse effects on hair, nails, teeth, bones, skin and ultimately to osteoporosis and in extreme cases, death. The set point theory of weight and acceptance of their own body size and shape should be inculcated at a very young age.

Advocate a well rounded life developing mind, body and spirit. Coaches and teachers of physical and health education, in addition to teaching skills, knowledge and attitude can also teach stress management behaviour. Subjects like physical and health education, as well as art, dance, cooperative games, music and drama, are fraught with potential as stress management alternatives to substance abuse (alcohol, drugs or food). A curriculum has been prepared for young women and men to appreciate and meet the different physiological, psychological social and cultural challenges that they will meet. A Preventive Curriculum for Anorexia Nervosa and Bulimia (Carney, 1986) produced and distributed by BANA in cooperation with CAPHER has been used in both English and Francophone schools around the world and evaluated as effective (Moriarty, Shore and Maxim, 1990).

## Sociocultural Influences

Perhaps the most comprehensive look at sociocultural influences in eating disorders was provided by Garner et al. (1984) at the Ottawa Cahper convention, when he identified five major sociocultural influences:

1. Emphasis on thinness
2. Glorification of youth
3. Changing roles of women
4. Popular media
5. The fitness fad and athletic excellence craze.

Mary and I have rephrased these with the following quotes:

1. As the Duchess of Windsor said, "No one can be too rich or too thin."
2. "It's not how good you look, but how long you look good."
3. "Superwoman - having it all and doing it all in a Size 5 dress."
4. "Virginia Slimming and dieting"
5. Athletic elitism and cosmetic fitness.

We would like to make some comments on Numbers 1, 3 and 5, i.e., shapes, superwoman and sport and fitness.

Emphasis on Thinness - Shape

The Greeks gave us the classical figure of substance for both men and women, and this served as an inspiration for R. Tait McKenzie as a sculptor. Bennett and Gurin (1982) described three types of idealized female shapes reflected in art throughout the centuries. The 'reproductive figure' of the late Middle Ages had a fecundity of corpulence and emphasized the stomach as a symbol of fertility. In the seventeenth and eighteenth centuries, there was a shift to the 'maternal figure' which, while still retaining ample body fat, accentuated the bosom and the buttocks. This is reflected in the work of Reuben and Renoir. It was reflected in modern times in the hourglass figures of Betty Grable and Marilyn Monroe. During the Christian era and Victorian period, we see the association of frailty with femininity, and finally in the twentieth century, the arrival of Twiggy in 1962 epitomized the thin, aesthetic ideal. It was devoid of reproductive focal points and may have represented a renunciation of the restricted traditional role model. According to Bennett and Gurin (1982),

> The centre of the new liberated woman was her thin body, which came to symbolize athleticism, non-productive sexuality, and a kind of androgenous independence.

If a thin shape has been considered desirable in Western society during this past century, in the past few decades it has been almost a fetish-like quality to the preoccupation with thinness for women. What may have begun as a representation of sexual and social freedom, now may have become as oppressive as previous social barriers by forcing women to assume an unrealistically thin shape, regardless of their biological propensities.

Another significant factor which has exacerbated this emphasis on thinness has resulted from the bias of the medical and health profession community towards emphasizing the risk of overweight, while at the same time virtually ignoring health risks presented by underweight. Being underweight is an equal or worse health hazard than being overweight (Garner, 1987). While this is true in general, it is doubly true for children and youth. As pointed out by Mallick (1983):

> Increased health risk is an assumed consequence of obesity, but this has been documented primarily in adult men. There is very little evidence of greater morbidity in obese children, and an association may not exist at all.
>
> (Quoted in Clark, Parr and Castelli, 1988: 18)

This is in contrast to underweight (anorexia nervosa and bulimia) which is reputed to have the highest mortality rate of any psychosomatic illness in the low risk of children and young adult age group. Mallick (1983) cautions health professionals to adopt a conservative approach with modest goals as the safest and wisest course of action.

> In our zeal to be healthier, more fit persons, we should not reinforce the exaggerated media focus on slimness in our society, which is intolerable of overweight. Rather, there needs to be support for a broader acceptance of body size and shape, especially concerning the vulnerable child. Children and adolescents, overweight or not, need to know that they are lovable, strong, smart and competent, just as they are!
>
> (Mallick quoted in Clark et al., 1988: 19)

Feminine theorists offer an explanatory framework emphasizing culture-specific meaning of eating disorders and eating disorder symptoms. Writers such as Orbach (1979) and Boskin-Lodahl (1976) have framed anorexic behaviour as excessively embracing rather than rejecting the traditional feminine role. They have characterized the excessively thin form of an anorexic as a parody of fashionable form, beginning as an assertion of natural desires, and purging as the reemergence of culturally determined, self-imposed strictures. They have viewed anorexia nervosa as quantitatively but not qualitatively different from "normal dieting," and thus have attempted to present the eating-disordered woman's symptoms as an essentially normal reaction to a pathological cultural situation.

Mazur (1986) has stated that extremism in style has selectively afflicted young women throughout history. Mazur, along with others (e.g., Polivy & Herman, 1987) has speculated that the ultra-thin woman of today is simply the current expression of the fragile feminine hysteric of the turn of the century. A radical article on the meaning of the current dictum of female bodily thinness further suggests that the focus on the female body as an object (of which the concern with body size is only one historical example) serves to oppress women by denying their creative, intellectual and affective potential (Aimez, 1983). Hence, it would seem that the current cultural obsession with feminine thinness may have its roots in centuries of preoccupation with the female body motivated by a male-dominated society. In the words of Henry Higgins, in My Fair Lady, "Why can't a woman be more like a man!"

Margaret Atwood (The Edible Woman, 1989) and Susie Orbach (Fat is a Feminist Issue, 1979 and 1986) have pointed out that "both sexes suffer when lovability is linked to thinness." (Quoted in Clark et al., 1988: 32). Hilda Bruch (Eating Disorders, 1974), Betty Friedan (1986) and others are quoted to deplore the fetish, obsession, mania for slimness, stamina and spoiled identity of people who organize their lives around weight loss. Lives, as well as bodies, are being shaped through the application of the current theories of obesity.

Changing Role of Women - Superwoman

Lise Blanchard, Canada's first Secretary of State for Women's Issues, in addressing the Fitness Leadership seminar in Alliston (Spring, 1986), pointed out that the feminist movement began in 1962, around the time of the arrival of Twiggy and emphasis on thinness. It has opened up great opportunities; however, as with any social movement, there will be casualties, if you combine excessive expectations with limited opportunities. Young women of today are expected to carry on their traditional roles and at the same time have a career. Whatever they do as a career, they are expected to mix it with being a super significant other, super housewife and super mom. They are expected to 'do it all' and 'do it all in a Size 5 dress.' There is often contradictory pressure on a woman to be sophisticated and successful while continuing to be fashionable, frail and slim. Like the Angenue lady, they are expected to

> get the kids to school on time, be in your office by nine, bring home the bacon, cook it up in a pan, and never let her husband forget he's a man.

Mary says, "The Angenue lady must be on drugs!"

The products of the baby boomer and weight watchers generation are bombarded daily with media messages about Virginia Slims (the thin long cigarette for the tall, elegant lady) and hot new diets (which incidentally provide less nutrition than was available to Londoners during the Blitz, Paris during the seige, or Holland during the occupation). A study by Drs. Feldman and Goodman (1986) on Ottawa high school students showed fifty percent were dieting needlessly and harmfully. A San Francisco study (1988) showed fifty percent of nine year olds and eighty percent of ten year olds were dieting and sixty-seven percent of the twelve year olds were binging and purging. In the San Francisco study sixty-five percent of eleven year olds expressed fear of fat and it was reported in Rapport (October, 1989) that

seventy-five percent of Canadian women think they are fat, despite the fact that eighty-five percent of Canadian women are within or below a healthy weight, as measured by the Body Mass Index. Where a problem does exist for Canadian women, it is the problem of underweight, rather than overweight, and therefore Canadian physical and health educators should discourage dieting and excessive exercise. The best way to manage weight is by use of the current Canadian Food Guide for five or six nutrition breaks per day, and the Canadian Active Living Program as a guide for moderate and healthy physical activity.

## Sports/Fitness Activity and Eating Disorders

Studies have suggested that the incidence of eating disorders is much higher in children and young adults in a variety of sports and physical activities. For example, David Garner et al. (1983) found that thirty-five percent of a prominent Canadian ballet company had an eating disorder and nine percent were clinically ill and should be hospitalized.

Patricia Perry (1986), founder and Director of the Eating Disorder Clinic, Inc. of Toronto, has reported a high incidence of figure skaters in the clientele of her agency.

Rosen (1986) reported among Division I NCAA gymnasts twenty-four percent vomited, used laxatives or diuretics, sixty-one percent binged, ninety-two percent had body image distortion and dieted, but only seven percent were on a formal medically controlled diet. Ever since the time of Olga Korbut, judges have been biased towards the pixie-sized prepubescent form. Nadia Comeniec could not compete in the FISU Games in Edmonton because she was ill - the illness was bulimia, the result of sexual harassment and self-starvation to maintain a slim gymnastic physique. Cathy Rigby McCoy has written a book on her chronic battle with anorexia nervosa, and Mary Lou Retton speaks publicly of the treatment she underwent to overcome bulimia. We have a tendency as Canadians to think that we are immune to these

sociocultural illnesses. This is not true. Mary-Ellen Wilcox, Canadian Junior Gymnastics Champion of 1975 when she was fifteen, in her own words, "became a victim of my womanly boc. at sixteen, despite rigorously controlled eating, bottles of dextrose tables and laxatives, and containers of honey to sustain energy." Her legacy today - hypoglycemia and erratic eating habits. Barbara Warner, champion downhill skier, number two on the Quebec team, winner of the gold medal in the 1988 Olympics is a victim of bulimia and attempted suicide. Denise Benning, one of my students who was a member of the Canadian pairs figure skating team at the Calgary Olympics, reports that over half of the girls who attended a Canadian figure skating summer training camp ended up with an eating disorder.

Middle distance and marathon runners show similarities with eating disordered individuals as shown by Yates, Leahey and Shisslak (1983). Both groups (1) inhibit anger, (2) have excessively high expectations, (3) deny debility, (4) tolerate discomfort and (5) suffer depression after a runner's high which is induced by an endorphin release.

Katz (1986) suggests that extreme exercise such as long distance running can predispose individuals to eating disorders. He indicated that when weight loss is followed by excessive exercise, certain biological and social reinforcers become evident. This also is followed by diminished appetite, increased machoistic investment in the body, and an elevated production of endorphins which enhance mood. Katz (1986) reports that bulimic behaviour becomes apparent in relation with reduced running and exercise. This is true not only for women in running, but also for males in a variety of other sports such as swimming, diving, rowing, riding and wrestling (Blake and Burckes-Miller, 1988; Burckes-Miller and Black, 1988 a & b; Leichner, 1985 and Rosen 1986).

Therapist Patricia Perry believes that the marketing of fitness has had something to do with the increase in eating disorders. She points out:

> As female consumers of fashion and fitness, we are comparing ourselves to stereotypes that are often quite disturbed in eating and exercise habits. For example, Jane Fonda has the thin, fit body women desire, but this is a result of bulimia as a teenager, abuse of speed and diuretics to stay model-svelte until her early thirties, and involvement in promotion and excessive exercise for weight control up to the present. We sell fitness as an unmixed blessing, but this is not the case. Indeed the fad proportions of fitness may be contributing to eating disorders. Women are trying to achieve weight control through overexercise. It is not true that the more you do the more it does for you.
>
> (Hooked on Perfection, Verve, Aug./Sept., 1986: 79-80)

Perry (1986) goes on to point out that those who take fitness/sport too far may be called 'obligatory exercisers.' For them, exercise is an excessive and compulsive pursuit of the ideal body, not an activity that enhances wellbeing or performance.

Little research has been done to date on the incidence of eating disorders and body image distortion among exercisers and those who instruct them. Blumenthal, Rose and Change (1985) provide a review of the relationship between anorexia nervosa and exercise. Leichner, Rallo and Leichner (1989) at Douglas Hospital in Montreal conducted a study on the attitude and behaviour among exercising women, while Rawlings (1989) and Ford (1991) at the University of Windsor assessed the incidence of eating disorders and body image distortion among fitness instructors. These studies are reported elsewhere (Moriarty, Rawlings, Ford and Leichner, 1991).

Eating disorders are not really about eating or not eating, but rather about self image and body image distortion, disturbance and dissatisfaction. Charles Cooley, as early as 1902, pointed out that "People's opinions of themselves reflect their views of others' opinions of them" (Judith Gordon in Clark, Parr and Castelli, 1988: 150). He elaborated upon this concept by specifically focusing upon people's views of the appearance of their bodies, and pointed out that we see ourselves reflected in a "Mirror Image" - "The Looking Glass Self." George Herbert Meade in "The Interactional Process of Symbolic Meaning," expounded upon the interactionist process by which selves are shaped, and noted that "some people's

reactions have more symbolic meaning than others'" (Ibid.: 152). What is the reality of body size versus body image distortion, disturbance and dissatisfaction among Canadian women?

Health and Welfare Canada assessed and reported on the "percent of population in each weight status group (based on body mass index of acceptable weight-for-height) by age and sex, aged twenty-plus, Canada 1988." As shown in the attached table, in the twenty to twenty-four age bracket, 46% of Canadian women were at an acceptable BMI, 6.5% were overweight, while 42% were underweight. This is the pattern which persists up to the mid-forties. Ford (1991), in her study of Ontario Fitness Council instructors, provides interesting results on the body mass index (BMI) and the body image distortion questionnaire (BID). In terms of the body mass index, 74% of aerobic instructors from the Ontario Fitness Council registered at an acceptable score between 20-25, while only 5% had scores over 25, which indicated overweight, but 22% had BMI scores under 20, which indicated they were underweight. This indicates that where there is concern among Ontario Fitness Council members, it should be for underweight rather than for overweight female instructors. How did the Ontario Fitness Council instructors see themselves? In the Ford study, in terms of the body image distortion questionnaire (BID), the mean percentage that the sample of women distorted (overestimated) was 8.5%. Indeed, 86% of the OFC female members overestimated their body size, some by as much as 30%. It is interesting to note that virtually all of the male OFC fitness instructors underestimated their body size. This distortion may explain why, as Naomi Wolfe states in The Beauty Myth, women turn to eating disorders and men turn to steroids in pursuit of the one-stone solution. Women feel a compulsion to lose fourteen pounds, and men feel a compulsion to gain fourteen pounds, both with the expectation that the world will be right when this goal is achieved.

Much of this, we believe, is a result of the marketing of fitness by the video queens, trash and flash fitness, which is body effacing versus body embracing. Physical and health educators should point out that too much or too little sport or fitness can be dangerous to your health.

National Collegiate Athletic Association Survey

While drug and alcohol abuse grabs most of the headlines at the institutional level, a recent survey by the National Collegiate Athletic Association sports-science division reveals that eating disorders quietly have become a significant health problem among college student-athletes (Dick, 1990). Sixty-four percent of NCAA member institutions responding to a voluntary survey reported that at least one student-athlete had experienced an eating disorder during the past two years. The vast majority of the reports (93%) were in women's sports.

Women's gymnastics was the sport with the largest percentage of sponsoring schools reporting an eating disorder (48%). The next highest percentages were in women's cross country (23%); women's swimming and women's track and field (both 21%). Basketball, soccer, field hockey, volleyball, lacrosse and softball reported 10% or more.

Contrast this with the results for men, which show that wrestling was the men's sport with the most reports (20) and the greatest of percentage of sponsoring schools reporting an eating disorder (7%). Men's cross country (3%); gymnastics and track and field (2%); and swimming and football (1%) also were identified.

Randall W. Dick, NCAA Assistant Director of Sport Sciences, has pointed out that:

> The higher prevalence of eating disorders in female as opposed to male sport is similar to reports of eating disorders in other populations; however, it is also important to note that eating disorders are not completely limited to females.
> (Dick, 1990: 1)

In addition, although some sports may have a higher risk of athletes with eating disorders, this survey showed that eating disorders were reported in a wide range of activities. Because an eating disorder is a complex problem often hidden by those suffering from it, no sport should be considered exempt from the problem (Ibid).

Dick goes on to point out that the percentage of sponsoring school reporting probably is low as compared to the actual extent of the problem. It is probable that some of the non-responding institutions sponsor programs in which an eating disorder was present, but failed to report it, in view of the ignorance and denial of eating disorders among sponsoring schools, and the negative effect that reports of this nature are perceived to have upon recruiting programs and public image.

Sport/Fitness Programs and Maladaptive Behaviour

A number of studies at the University of Windsor Sports Institute for Research/Change Agent Research (SIR/CAR) conducted through out the 70's and the 80's show that when children/youth sports programs are professionalized, commercialized, centralized and politicized, maladaptive behaviour among participants is a probable outcome (Brown, Holman and Moriarty, 1984; Hrycaiko, Moriarty and McCabe, 1978; Moriarty et al., 1982; Donovan and Moriarty, 1986; Moriarty, 1983; Moriarty, Guilmette and Zarebski, 1981; Moriarty, Guilmette and Leduc, 1978; Holman and Moriarty, 1989). Macintosh, Bedecki and Franks, in their study of Sports and Politics in Canada: Federal Government Involvement Since 1961 (1987), arrived at the same conclusion. The Knight Report (1991) on University Athletics in the United States and Donald Whitney Matthews' report on Athletics in Canadian Universities (1974) expressed similar concerns. Most recently the Dubin Commission (1990) provides testimony to the extent of maladaptive behaviour in the form of steroid abuse in amateur athletics.

For the most part, these studies focus upon males, since until recently systemic discrimination in North America has made both amateur sport and professional athletics mainly a male domain. The women's movement and equity advances over the past decade have lead to a number of studies showing overemphasis on women's sports, as is the case in men's sports, leads to maladaptive behaviour which invariably takes the form of an eating disorders.

Mariah Burton-Nelson (1991) in Are We Winning Yet? How Women Are Changing Sports and Sports are Changing Women makes some interesting points in her opening chapter on "Playing with the Boys" (1991: 310). She points out that there has been considerable change in women's sports and fitness which accompanied the "sprint towards equal opportunity" (1991: 4). Prior to the equity emphasis, women athletes used to practice and play in the privacy of 'women's gyms' engaging in sport ethic characterized as 'socializing sport' which prompted skill, friendship, fair play, 'high moral conduct,' and participation for all, as contrasted with men's athletic business which was characterized by elitist 'win-at-all-costs' mentality, commercialization and centralization. Many female coaches and administrators of the 'old school' feared that the values they had been teaching for decades would be destroyed by the influx of money, prestige, cutthroat competition that accompany many men's programs.

What has been the outcome of this movement as women enter mainstream sport? On the positive side, women have had an opportunity to participate and develop physical competency and skills, to develop self confidence and face the challenge of being a role model. In North American high schools, approximately two million women play interschool sports, up from a one-third of a million in 1971. In college approximately thirty-four percent of the athletes are female, and over one-third of the Canadian and U.S. Olympic teams are female. Print and electronic media have increased coverage of women's sports.

Yet, every gain includes a loss. As women's sports have become more popular and lucrative, men have claimed leadership roles, not only in coaching and officiating, but also in management. The world of sport still is mainly paternalistic. The CIAU (Canadian Interuniversity Athletic Union), which governs both men's and women's sports, is predominantly male, as is its counterpart in the USA, the NCAA. More than half of all women college teams in the USA are now coached by men, and there is a similar trend in Canada, where forty-nine of fifty-eight national teams were coached by men in 1991.

On the professional level, males act as executive directors for the Women's Tennis Association, Ladies Professional Golf Association and the Ladies Bowlers Tour. In 1991 of the fifty-two members of the Canadian Olympic Association only six were women, and ninety-one of the one hundred and five members of the US Olympic Committee were male. Of the thirty-eight national governing bodies of sport in the USA (such as the US Figure Skating Association), thirty-four have male presidents. In Canada, of the sixty-five or so sports represented at the National Centre, women represent only about thirteen percent of the head coaches, and twenty-three percent of the high performance directors. In terms of salary, none of the women was represented in the highest category and the percentage went up as the remuneration went down. One quarter of women, compared to less than five percent of men, had experienced overt discrimination (Hatch, 1991: 8).

Information about women's athletics is filtered through male writers, photographers, broadcasters and publishers: approximately 9,650 of the nation's 10,000 print and broadcast sports journalists in the U.S. are men, and statistics are even more grim in Canada. As Mariah Burton-Nelson points out, "now women play in 'men's gyms', under male rules, male officiating, male coaching, and too often, male harassment (1991: 5). In general, women involved in athletics and physical activity find themselves in the hostile, paternalistic, 'Manstream' sport world.

## Competitiveness in Sport/Fitness and Eating Disorders

Garner (1984) reported studies assessing the relevance of competitiveness in terms of eating disorders. He reported the results of a study comparing dance students and music students from high expectation settings. This study showed a percentage deviation from average body weight of -17.9 for dance students and only -6.3 for music students (Garner, 1983). In a further analysis, the total dance group was further subdivided and it was found that those in the more competitive setting were -19.8% deviant from average body weight, while those in the less competitive setting were -8.6 from normal body weight. The message here is that the degree of competitiveness bears a direct relationship with the degree of the severity of eating disorders, and further that women involved in activities such as dance (and it might be added, gymnastics, figure skating, aerobic dance and fitness programs) which carry with them expectation of slimness and also place physical demands upon the participants, place the individual much more at risk than competitive settings such as university and music students encounter (-3.7 deviation from average body weight) or even modelling students (-11.9).

What is the association between physical education and eating disorders? A study worthy of note is that of Anthony, Wood and Goldberg (1982) of 245 college females involved in areas of study emphasizing exercise (physical and health education) or body image (dance and drama). Utilizing an Eating Attitude Test (EAT), the researchers found significantly higher scores among dance and drama students than among those majoring in physical and health education (or English). Their findings provide further indication that those at risk for eating disorders gravitate toward activities of endeavour that emphasize body image, rather than towards areas merely emphasizing physical exercise.

Finally, an interesting study by Jorgun Sundgot-Borgen on "Pathogenic Weight Control and Eating Disorders Among Female Athletes" demonstrates that sports can be a factor either in precipitating or preventing an eating disorder - depending on the nature of the sport and the way it is presented and conducted. This large study of 521 athletes and 447 controls utilized the Eating Disorder Inventory (EDI) and a demographic questionnaire to investigate the incidence of eating disorders among athletes and controls. The athletic group was subdivided depending upon the nature of the sport. Six categories were utilized for sport: (1) technical, including such things as long and high jump, sailing and golf; (2) endurance, such as middle and long distance running, rowing, swimming and speed skating; (3) aesthetics, such as dance, gymnastics, figure skating and diving; (4) weight dependent, such as wrestling, judo and karate; (5) ball games, such as basketball, volleyball, tennis and badminton and (6) power, such as powerlifting, shot put and discus.

Results showed that 32% of the athletes contrasted with 20% of the controls were dieting, and further that 34% of the dieting athletes and 25% of the dieting controls used pathogenic weight control methods. The highest frequency of athletes using pathogenic weight control methods and athletes defined as risk subjects were found in the endurance, aesthetic and weight dependent sports.

In many sports (gymnastics, figure skating, distance running and cross country skiing) low weights are considered necessary for optimal appearance and performance (Brownell and Nelson, 1989; and Brownell, Rodin and Wilmore, 1991). Some sports even impose specific weight limits for competition (wrestling, rowing and horseracing). In other sports, such as gymnastics, dance, figure skating and diving, aesthetic appeal is considered important. However, as pointed out by Rosen (1991), in response to a BANA survey:

> Many athletes who engage in drastic weight control do so under the assumption that weight reduction will improve performance. It is important for the athlete to have a realistic idea of the impact of weight and diet on performance. Moreover, it needs to be clarified that the presence of an eating disorder almost certainly interferes with performance as an athlete. Although there are some notable instances in which athletes have been quite successful while suffering from an eating disorder, these are the exceptions. The metabolic consequences of symptoms such vomiting and laxative abuse undoubtedly have a negative effect on performance and can be fatal. (Garner & Rosen, 1991)

An initial analysis of the Borgen study on the percentages from 168 subjects who scored above known anorexics on the eight subscales of the Eating Disorder Inventory, showed little difference in scores between non-athletes (N = 101) and the total athletes (N = 67); however, when the athletes were divided into athletes in activities with an emphasis on leanness (N = 35), contrasted with athletes in activities with no emphasis on leanness (N = 32), there is a significant difference. For example, athletes in activities with emphasis on leanness exceeded non-athletes in six of the eight subscales of the EDI. On the other hand, athletes in activities with no emphasis on leanness had lower scores on seven of the eight subscales (drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interoceptive awareness and maturity fears), i.e., they were healthier than the controls. When asked why they were dieting, athletes indicated that it was to enhance performance (67%) or they were told to diet by their coaches (38%), parents (27%) or doctors (5%) or to improve attractiveness (14%). Controls, on the other hand, dieted mainly to improve attractiveness (95%), with only 6% interested in enhancing performance.

The message seems to be clear: namely, physical activity in and of itself does not precipitate eating disorders; however, if programs are presented with an emphasis on elitism, winning and body image,and use weight loss to enhance performance, they may very well serve as a precipitating or perpetuating activity for an eating disorder. Certainly, physical and

health educators and coaches, utilizing activities or sports which are aesthetic in nature, weight dependent, and/or involve endurance, should be particularly vigilant in guarding against eating disorders.

Referral and Treatment of Athletes with Eating Disorders

There has been a considerable amount of quality research conducted and published on the incidence and detection of eating disorders among athletes, aerobic exercisers and dancers, but limited published literature on the treatment of this target population. To rectify the shortcoming, BANA sent an opinionnaire on this topic to approximately three-dozen treatment therapists and university health centres. Responses were received from Australia, the UK, Norway, seven states in the US and four provinces in Canada. Results are published elsewhere, so emphasis here will be on only the questions which related to problems with sport and exercise clients, or with the sports/fitness establishment and the role of teachers, coaches and administrators.

The most frequently cited problems with sport/exercise clients were:

1. pressure from coaches/trainers to lose weight and excessively rely upon weight loss to improve performance
2. excessive exercise and guilt among athletes when not overtraining, even in the face of stress fractures
3. culturally endorsed abnormal behaviour in the sport world such as counselling for starvation and steroids
4. emphasis regarding food, weight and performance
5. seeking short-term performance at the cost of long-term health

The most frequently cited problems with fitness establishment were:

1. ignorance of dieting dangers
2. no counselling of athletes regarding the danger of being thin versus fit
3. denial of the problem of eating disorders and failure to evaluate health loss for competitive gain
4. reticence to refer eating disordered individuals for treatment, and fear on the part of coaches/trainers and doctors that their authority would be usurped
5. however, agencies cooperated once informed and convinced of the problem.

Role of the teacher/coach and administrator:

1. these individuals have been part of the problem, but they could be part of the solution
2. they often precipitate and perpetuate eating disorder
3. they should decrease the emphasis on body weight and increase awareness of the risk of dieting and being underweight, e.g., osteoporosis, menstrual problems, deterioration of teeth, nails, hair, skin and in severe cases, electrolyte imbalance and death
4. teachers should provide nutritional guidance, discourage dieting and encourage moderation in school, sports and social life
5. educate yourself on the signs, symptoms and characteristics of eating disorders, identify those at risk, refer them for treatment, and cooperate in the treatment program
6. teachers, coaches and administrators in physical and health education should run preventive programs, and prevention is the best form of treatment

The results of this survey provided grounds for both pessimism and optimism regarding the future of eating disorders among sport and fitness participants. Pessimism stems from the response from one prominent medical authority, chef de mission of an Olympic medical team, and chairman of a national sports medicine council (of a country which will remain unnamed), whose one paragraph response stated, "I have no particular recent experience in treating individuals with eating disorders." Would he have responded similarly to an opinionnaire on the male sport problem of steroids. We think not, particularly in a country such as Canada, where we spent more money on the Dubin Commission than the total cost of sending the Canadian contingent to the Seoul Olympics. Regrettably no similar efforts have been made in the eating disorder area, a medical problem with more chronicity and a higher mortality rate than that attributed to performance enhancing drugs.

Optimism was in order, however, as eating disorders are 'brought out of the closet' as more physical and health educators, coaches and fitness instructors include A Preventive Curriculum for Anorexia and Bulimia (1984) in their programs. There are a number of model programs which provide an example of comprehensive assessment, referral and treatment and address the physiological, psychological, sociological and cultural issues which precipitate and perpetuate eating disorders in the predisposed student or athlete. Teachers and coaches are in an excellent position to identify and refer for treatment those with eating disorders. Evaluation and policy research on programs which have been implemented show an enhancement of overall fitness and health of female students and athletes with no deterioration in either academic or athletic performance.

Researchers in the sport and athletic area have turned out a number of excellent publications which will be of interest to physical and health educators, coaches and administrators. The Canadian Association for Health, Physical Education and Recreation led

the way with a 'special issue' on "Eating Disorders" in July/August, 1986 Cahper Journal. In 1989, the International Amateur Athletic Federation (IAAF) acknowledged eating disorders as a major problem with the publishing of "Too Thin to Win." In 1992 the National Anorexic Aid Society Newsletter for October/December was devoted entirely to "Eating Disorders and Athletes." The National Collegiate Athletic Association (NCAA) has turned out a pamphlet on "Nutrition and Eating Disorders in College Athletes" (1991) and also has produced three audiovisual aids on nutrition and eating disorders" "Afraid to Eat: Eating Disorders in Student Athletes"; "Out of Bounds: Nutrition and Weight"; and "Eating Disorders: What Can We Do?" The Sports Medicine Council of Canada also has developed "Desperate Measures: Eating Disorders and Athletics" as an audiovisual aid. In 1984 BANA produced A Preventive Curriculum for Anorexia Nervosa and Bulimia (Carney) which was designed for Grades 7 through 12 and has been distributed widely and used throughout the world, thanks mainly to the efforts of the Cahper publication and distribution system.

## Summary

Physical and health educators, teachers, coaches and administrators have a major role to play in the prevention and treatment of eating disorders. They are in a position to provide a counterculture to the five sociocultural influences identified with eating disorders:

1. pressure to be thin
2. glorification of youth
3. superwoman syndrome
4. Virginia Slimming and dieting
5. athletic elitism and cosmetic fitness

These pressures have increased in modern society as we pass from the Greek ideal of sport, mens sano, corporo sano - a sound mind in a sound body - to better teams through starvation and steroids and current flash and trash fitness.

As Princess Diana said at the recent eating disorder conference in London, England (Tuesday, April 27, 1993):

> As parents, teachers, family and friends, we have an obligation to care for our children. To encourage in God how much to nourish and nurture, and to listen with love to their needs in ways which clearly show our childrenthat we value them. They, in their turn, would then learn how to value themselves. . . . With greater awareness and more information, these people, who are locked in a spiral of secret despair, can be reached before the disease takes over their lives.

You can make the dream come true by:

1. studying the signs, symptoms and characteristics of eating disorders, identifying the problem and referring individuals with eating disorder for professional assistance
2. marketing and implementing active living and weight management rather than weight reduction, addressing the fact that being underweight is at least equally hazardous to your health as being overweight.
3. teachers and coaches should counsel students and athletes to moderation and a well balanced mix of school, sport and social life, and structure programs to avoid grounding students in excessive expectations in this world of limited resources.
4. incorporate active living, sport, fitness and related activities (dance, music, cooperative games and relaxation) as alternate stress management techniques to avoid addiction to eating disorders and other maladaptive behaviour
5. become significant advocates of the shift from the elitist image of physical activity, fitness and sport which contributes to unrealistic goals and false image to mass participation in a happy and healthy moderate active living program
6. challenge yourself to live and present yourself as a healthy, happy role model leading a balanced life and caring for yourself as well as others.

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